

## REMARKS

### Prior Art Rejections

#### A. U.S. Patent No. 5,976,082

Claims 1, 5, 8 – 11, 14 – 16, and 19 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,976,082 to Wong et al. (hereinafter “Wong”). Wong discloses a method for identifying at risk patients diagnosed with congestive heart failure. Wong teaches a computer-implemented technique, including database processing, to identify at risk congestive heart failure patients where information about the patients exists in a claims database. Wong samples only patients who are known to already have congestive heart failure.

Wong teaches a claim extraction step, step 116, that extracts all claims data for patients with either an appropriate code for CHF or for treatment with a CHF-related drug. Each claims data point has a date associated therewith. A time window is selected, for example an 18 month window beginning two years ago and ending six months ago, and only data points that exist in the selected time window are placed in an analysis file. Statistical processing is then performed on the analysis file. The statistical processing, when applied to the analysis file, identifies variables in the claims data which meet predetermined levels of significance. All of the data points are from claims data. Therefore, in order for an event to be considered by the system, it must have already happened, and it must be the type of event which is recorded in claims data. The Wong system is restricted to the type of information provided by claims data and it provides no application for patients who have not had congestive heart failure in the past. Furthermore, claims data is received from databases, health care providers, and from insurers, not from individuals.

Wong scans the claims data and extracts information such as Age, Gender, HMO membership, site code of first CHF diagnosis, presence of Ischemic Heart disease, Number of ACE inhibitor prescriptions, and many others (see Table 1, cols 12 & 13). These values, which are indicative only of medical information values recorded in claims, are put into an algorithm.

As shown in Fig. 6A, Wong developed a scheme for defining prediction zones and censoring data to create the analysis zone. The time window defines a prediction zone or region 610 and an events window (analysis region) 612 from where activity is used to predict something in the prediction zone. (Col. 13, lines 51 – 58). As can be seen in Fig. 6A, both

the time window and the prediction zone are in the past and are populated by data points that have already happened.

The present invention identifies individuals who are at risk of high near-term healthcare use in the future based on perceived health information and other information. Perceived health is defined as a person's composite evaluation of how he or she is feeling and doing. This is the type of information that is not available in claims data. Furthermore, evidence also shows a correlation between (i) an individual's beliefs and preferences regarding the healthcare system and (ii) particular types of healthcare-seeking behavior. In particular, individuals who place high levels of faith in the healthcare system or desire the input of health professionals to make health decisions tend to use the healthcare system more often. Such beliefs and preferences are not the type of information contained in claims data. To this end, the system obtains information from an individual via a health perception questionnaire. The questionnaire is tailored to elicit information for a predetermined set of predictive factors including: past healthcare use factors, demographic factors, perceived health factors, disease factors, healthcare compliance factors, healthcare belief factors, and healthcare preference factors. The answer to each question is then categorized into either "indicative of becoming a high encounter user within six months" and assigned a value of "1" or "not indicative of becoming a high encounter user within six months" and assigned a value of "0." These values which are indicative of a risk of the individual utilizing healthcare services are then put into an algorithm to arrive at an overall indicator of likelihood of near term healthcare utilization.

The questionnaire can take the form of an interactive video display and an input device to a computer or the like. Once the questions are answered by the individual, the system is able to output the results of the analysis. The results may include a general health report, advice as to how the individual may improve their overall health, information about appropriate intervention programs, and follow-up coaching reports from care providers.

1. Claim 1

In the August 19, 2002 Office Action, the Examiner stated:

"As per claim 1, Wong discloses a method of identifying patients at high risk of adverse health outcomes comprising: ... (c) generating, based upon a prediction model and the separate values assigned to the predetermined set of criteria or predictors, risk subgroups (reads on "risk level") of the patient using health care resources at a predetermined level, such as cost, over a predetermined time interval or window."

Claim 1 requires the step of “generating, ... a risk level of said individual utilizing healthcare services at a predetermined level within a prospective time span.” A time span is a finite period. Whereas Wong models the likelihood of adverse health outcomes sometime in the future, the embodiment described in claim 1 predicts healthcare utilization within a finite time period. Such a prediction can help healthcare providers plan and manage their resources for the expected utilization.

The “time windows” of Wong are data spaces and not prediction time frames. The “time windows” of Wong are finite time frames but are always in the past and are the data input to the prediction system.

Further, the “prediction windows” of Wong are times in the past having data points therein that are used to train the prediction system and determine weighting values. The “prediction windows” of Wong are finite but are time frames in the past, thereby not prospective, that are populated by past events and are used to create and calibrate the prediction system.

In the August 19, 2002 Office Action, the Examiner also stated:

“As per claim 1, Wong discloses a method of identifying patients at high risk of adverse health outcomes comprising: ... (a) receiving (reads on ‘collecting’), storing, and extracting information from a patient record (reads on ‘individual’) for a predetermined set of criteria or predictors.”

The examiner has thereby equated “patient records” with “individual”. The present invention involves providing an individual with a questionnaire to collect information. Patient records are restricted to the types of data kept therein. Individuals are able to provide a much larger range of information and to answer questions such as, “Overall, how adequately do you feel you are managing your medical condition(s)?” Also, patients who may be at risk, but who do not regularly visit a doctor, or who have never visited a doctor would have limited or no claims data available about them. Therefore, “patient records” do not read on “individuals” because there is much information that is relevant and yet not kept in “patient records.”

Wong attempts to predict future events but fails to specify any finite timeframe in which the adverse health outcomes will happen. Wong fails to teach or suggest the step of “generating, ... a risk level of said individual utilizing healthcare services at a predetermined level within a prospective time span” as required by claim 1. Wong is also

only analyzing claims data. Wong fails to teach or suggest the step of “collecting information from an individual for a predetermined set of predictive factors.” Therefore, the Applicant believes that claim 1 is presented in condition for allowance and respectfully requests reconsideration of claim 1 with respect to Wong.

2. Claims 5 and 8 - 10

Claims 5 and 8 - 10 depend from claim 1. Because claim 1 is believed to be allowable, claims 5 and 8 - 10 are also believed to be allowable. Additionally, claims 5 and 8 - 10 are believed to contain independently patentable features.

3. Claim 11

In the August 19, 2002 Office action, the Examiner stated:

“System claim 11 differs from the method claim 1 by reciting hardware elements, namely, a processor and memory comprising a plurality of instructions.... The remainder of the system claim 11 repeats the same limitation of method claim 1, and is therefore rejected for the same reasons given above for claim 1.”

In that the Examiner relies on the rejection of claim 1 in the rejection of claim 11, Applicant respectfully asks for reconsideration of claim 11 in light of the arguments put forth with respect to claim 1. Applicant believes that claim 11 is presented in condition for allowance and respectfully requests reconsideration of claim 11 with respect to Wong.

4. Claims 14 - 15

Claims 14 - 15 depend from claim 11. Because claim 11 is believed to be allowable, claims 14 - 15 are also believed to be allowable. Additionally, claims 14 - 15 are believed to contain independently patentable features.

5. Claim 16

In the August 19, 2002 Office action, the Examiner stated:

“Claims 16 and 19 repeat the subject matter of method claims 1 and 8, respectively, as a computer readable medium comprising a plurality of instructions executed by a healthcare management system to carry out the series of steps from method claims 1 and 8.”

In that the Examiner relies on the rejection of claim 1 in the rejection of claim 16, Applicant respectfully asks for reconsideration of claim 16 in light of the arguments put forth with respect to claim 1. Applicant believes that claim 16 is presented in condition for allowance and respectfully requests reconsideration of claim 16 with respect to Wong.

6. Claim 19

Claim 19 depends from claim 16. Because claim 16 is believed to be allowable, claim 19 is also believed to be allowable. Additionally, claim 16 is believed to contain independently patentable features.

B. U.S. Patent No. 5,976,082 in view of U.S. Patent No. 5,486,999

Claims 2-3 and 17 were rejected under 35 U.S.C. 103(a) as being unpatentable over Wong in view of U.S. Patent No. 5,486,999 to Mebane.

1. Claims 2-3

Claims 2-3 depend from claim 1. Because claim 1 is believed to be allowable, claims 2-3 are also believed to be allowable. Additionally, claims 2-3 are believed to contain independently patentable features.

2. Claim 17

Claim 17 depends from claim 16. Because claim 16 is believed to be allowable, claim 17 is also believed to be allowable. Additionally, claim 17 is believed to contain independently patentable features.

C. U.S. Patent No. 5,976,082 in view of U.S. Patent No. 6,269,339

Claims 4, 12-13, and 18 were under 35 U.S.C. 103(a) as being unpatentable over Wong in view of U.S. Patent No. 6,269,339 to Silver.

1. Claim 4

Claim 4 depends from claim 1. Because claim 1 is believed to be allowable, claim 4 is also believed to be allowable. Additionally, claim 4 is believed to contain independently patentable features.

2. Claims 12-13

Claims 12-13 depend from claim 11. Because claim 11 is believed to be allowable, claims 12-13 are also believed to be allowable. Additionally, claims 12-13 are believed to contain independently patentable features.

3. Claim 18

Claim 18 depends from claim 16. Because claim 16 is believed to be allowable, claim 18 is also believed to be allowable. Additionally, claim 18 is believed to contain independently patentable features.

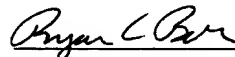
Final Remarks

It should be appreciated that the amendment to claim 5 was only for clarification purposes and does not alter the scope of the claim. Therefore, the amendment made was not a limiting amendment and was not made for reasons relating to patentability.

Applicants submit that claims 1 – 27 are in condition for allowance. It is respectfully requested that the Examiner so find and issue a Notice of Allowance in due course. If necessary, the Examiner is asked to call Applicants' attorney, Ryan C. Barker, at (317) 684-5295 to address any outstanding issues to expedite the prosecution of this application for all parties.

If necessary, Applicants request that this Response be considered a request for an extension of time for a time appropriate for the response to be timely filed. Applicants request that any required fees needed beyond those submitted with this Response be charged to the account of Bose McKinney & Evans, Deposit Account Number 02-3223.

Respectfully submitted,



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ATTACHMENT A

5. The method of claim 1, wherein said assigning step comprises the steps of:

determining, based upon said information, whether [said] a first predictor factor is indicative of a high risk of said individual utilizing said healthcare services at said predetermined level within said prospective time span;

assigning, based upon said information, a first dichotomous value to said separate value for said first predictive factor [in response to] if said determining step [determining] determines that said first predictor factor is indicative of said high risk of said individual utilizing said healthcare services at said predetermined level within said prospective time span; and

assigning, based upon said information, a second dichotomous value to said separate value for said first predictive factor [in response to] if said determining step [determining] determines that said first predictor factor is not indicative of said high risk of said individual utilizing said healthcare services at said predetermined level within said prospective time span.